

REMARKS/ARGUMENTS

The Office Action of April 13, 2006, has been carefully considered.

It is noted that claims are objected to for not being properly numbered.

The disclosure is objected to for containing various informalities.

The drawings are objected to under 37 C.F.R. 1.83(a).

Claims 15-31 are rejected under 35 U.S.C. 103(a) over the patent to Stiesdal, et al. in view of the patent to Albrich, et al.

In view of the Examiner's objection to the disclosure, applicant has amended the specification to delete reference to specific claim numbers. Furthermore, applicant has amended the specification to include section headings.

In view of these considerations it is respectfully submitted that the objection to the disclosure is overcome and should be withdrawn.

Regarding the objection to the drawings, applicant has submitted herewith replacement sheets which illustrate the features required by the Examiner. Regarding the stator frame, reference is made to the paragraph beginning on line 17 on page 4 of the specification, where it is explained that the stator frame is made up of a number of elements. In the embodiment shown in the drawings the stator frame is formed by the stator rings 4, 5. The electrical elements are indicated in FIG. 4 with reference numeral 22. The temperature sensor is shown in FIG. 2 with reference numeral 25. The rotor frame has been indicated in FIG. 3 with reference numeral 24. The feature of each stator segment having its own housing is indicated with reference numeral 23 in FIG. 1. Regarding the feature of each segment being "independently operable" applicant submits that such feature can not be shown abstractly in a drawing. However, this function can be derived from the fact that each stator segment 3 has its own electrical connector 22. Applicant has amended the specification to include these reference numerals. It is respectfully submitted that no

new matter is added by these changes.

Furthermore, applicant has added new FIG. 5 which illustrates a torque motor in which angular segments of the stator frame are, by design, not occupied by any stator segments. This serves to clearly illustrate what is now recited in amended independent claim1.

It is respectfully submitted that no new matter is added by these changes.

In view of these considerations, it is respectfully submitted that the objection to the drawings is overcome and should be withdrawn.

In view of the Examiner's rejections of the Claims applicant has amended Claim 15 and canceled Claims 23, 30 and 31.

With the cancellation of Claim 30 it is respectfully submitted that the numbering of the claims is now proper in that all previous claims presented as Claim 30 have been cancelled.

It is respectfully submitted that the claims now on file differ essentially and in an unobvious, highly advantageous manner from the constructions disclosed in the references.

Turning now to the references, and particularly to the patent to Stiesdal, et al., it can be seen that this patent discloses a generator for a windmill. The stator of the generator consists of a number of stator modules that are individual and can be installed, repaired and dismantled individually and independently of each other. Furthermore, the windmill is easy to mount, especially at sea, since the stator can't be transported in smaller units. Figure 6 of Stiesdal, et al. shows a stator wherein one of the stator modules is dismantled. Twenty-four stator modules form the overall stator. Except when repairing or assembling the generator, all twenty-four stator modules are installed and form a closed ring.

The patent to Albrich, et al. discloses an electric motor having a stationary annular stator with wound stator poles and a rotatably mounted rotor having annularly distributed permanent magnets or electromagnets. In the event of failure of one or more motor stator segments, the

electric motor can continue to run generally (see column 1, lines 41-44). In the event of failure of a stator segment, this stator segment must be replaced quickly (see column 3, lines 50-51). Obviously, an operation of the motor having faulty stator segments is acceptable only during an emergency.

The Examiner combined these references in determining that Claims 15-31 would be unpatentable over such a combination. Applicant respectfully submits that a combination of these references does not teach or suggest the presently claimed invention. The objective of the present invention is to provide a torque motor having individual stator segments whereby the motor can be adapted to changed requirements regarding torque, power, speed of revolution and precision, even after the original manufacturer of the motor ie. under variable conditions of use.

According to the presently claimed invention at least one angular segment in the stator frame is by design not occupied by any stator segment. This provides a significantly different torque motor than the motors according to Steisdal, et al. and Albrich, et al. Motors according to the prior art were designed to operate having a stator ring completely filled with stator segments. In fact, the motor of Albrich, et al. remains in operation if one or more stator segments fail, but this is not the intended use of this motor. The motor according to the presently claimed invention can be adapted to varying requirements concerning torque, power, speed of revolution and precision. Angular segments in the stator frame can be occupied by stator segments in different configurations. Angular segments without any stator segment are desired in order to permit an adaptation to different requirements by other configurations where these empty angular segments will be filled by a stator segment. There is no teaching or suggestion of a motor which has this versatility of arrangement of the segments of the stator, as in the presently claimed invention.

Additionally, the segments of Albrich, et al. do not have individual housings as in the presently claimed invention. There is no need for individual housings in Albrich, et al. because the stator segments are mounted within a closed stator ring. Furthermore, the stator segments in the motor of Steisdal, et al. are not independently operable because they are electrically connected to each other.

Additionally, applicant submits that neither Steisdal, et al. nor Albrich, et al. provide any

motivation for adapting a motor having stator segments to different requirements concerning torque, power, speed of revolution and precision. Albrich, et al. in fact would only teach to those skilled in the art that any stator segment should be replaced or repaired immediately upon failure. Therefore, the references do not teach a motor in which at least one angular segment of the stator frame is purposely not occupied by a stator segment, as in the presently claimed invention.

A person of ordinary skill in the art would construct motors according to different power requirements by dimensioning the windings, but such a person would not be able to construct such a torque motor that can be adapted after the initial manufacture of the motor. As is known in the prior art, controlling the supply voltage permits an adapting of the power to some degree, but no adapting of torque and precision.

A person of ordinary skill would abstain from removing stator segments from motor as taught by Albrich, et al. since after removing stator segments, the motor would show an insufficient clocking.

The previously mentioned object of the present invention has been solved by a motor according to the claims presently on file. This motor can be adapted through different configurations of stator segments. For this purpose, at least one angular segment of the stator ring is empty to permit other configurations. A handy exchange of stator segments requires stator segments having their own housings. Furthermore, stator segments have to be designed according to the desired configurations in order to allow a sufficient clocking. There is no teaching or suggestion of such construction by the combination of references relied upon by the Examiner.

In view of these considerations it is respectfully submitted that the rejection of Claims 15-31 under 35 U.S.C. 103(a) over a combination of the above-discussed references is overcome and should be withdrawn.

Reconsideration and allowance of the present application are respectfully requested.

In the event any actual fee is greater than any payment submitted or is inadvertently not enclosed or if any additional fee during the prosecution of this application is not paid, the Patent Office is authorized to charge the underpayment to Deposit Account No. 06-2143.

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450, on August 14, 2006

Klaus P. Stoffel

Name of applicant, assignee or
Registered Representative

Klaus P. Stoffel
Signature

August 14, 2006

Date of Signature

Respectfully submitted,

Klaus P. Stoffel

Klaus P. Stoffel
Registration No.: 31,668
WOLFF & SAMSON PC
One Boland Drive
West Orange, New Jersey 07052
Telephone: (973) 530-2086

KPS:mj